

IN THE CLAIMS

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Claim 1. (Currently amended) A memory storage disk handling system, comprising:
a housing;
an elevator pin mounted on the housing for lifting disks into a stack;
a servo motor attached to the housing; and
a linkage assembly attached between the servo motor and the elevator pin,
wherein the elevator pin presses a single disk into the stack.

Claim 2. (Previously presented) A memory storage disk handling system, comprising:

a housing;
an elevator pin mounted on the housing for lifting disks;
a servo motor attached to the housing, wherein the servo motor includes a shaft, the linkage assembly includes an arm mounted on the shaft, whereby rotation of the shaft pivots the arm to lift the elevator pin; and
a linkage assembly attached between the servo motor and the elevator pin.

Claim 3. (Original) A memory storage disk handling system as set forth in claim 2, wherein the arm has a fixed end and a moveable end, the fixed end mounts on the shaft, and the moveable end includes a cam surface that cams against the elevator pin when the arm pivots.

Claim 4. (Original) A memory storage disk handling system as set forth in claim 3, wherein the elevator pin has an axis, and a base that lies in a plane perpendicular to the

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axis, the elevator pin includes a slot that parallels the base, the cam surface cams within the slot to lift the elevator pin in the direction of the axis.

Claim 5. (Original) A memory storage disk handling system as set forth in claim 3, wherein the elevator pin has an axis, a longitudinal surface and a cam pin extending radially outward from the longitudinal surface, the moveable end of the arm defines a slot that cams against the cam pin when the arm pivots.

Claim 6. (Original) A memory storage disk handling system as set forth in claim 2, wherein one end of the arm mounts on the shaft and the other end of the arm mounts on the elevator pin, the elevator pin has an axis, the servo motor pivots the arm to lift the elevator pin in the direction of the axis and the elevator pin rotates about the axis when the arm lifts the elevator pin.

Claim 7. (Canceled)

Claim 8. (Canceled)

Claim 9. (Canceled)

Claim 10. (Original) A memory storage disk handling system comprising:
a housing defining a hopper for receiving disks;
an elevator pin mounted on the housing for lifting disks into the hopper; and
the hopper being configured for aligning lifted disks into a stack and includes
at least one pawl for holding lifted disks in the hopper.

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Claim 11. (Original) A disk handling system as set forth in claim 10, wherein the hopper includes hollow portions and at least two pawls, the pawls being slidably mounted within the hollow portions.

Claim 12. (Original) A disk handling system as set forth in claim 10, wherein the hopper includes three posts oriented to surround lifted disks, at least one pawl mounts on each post.

Claim 13. (Original) A disk handling system as set forth in claim 12, wherein each post includes a hollow portion, the pawls being mounted at least partially within the hollow portions of the posts.

Claim 14. (Original) A disk handling system as set forth in claim 13, wherein the pawls are slidably mounted within the hollow portions of the posts so that lifting a disk slides the pawls into the hollow portions, and after the disk is lifted, the pawls extend from the hollow portions to hold the disk in the hopper.

Claim 15. (Previously presented) A disk handling system as set forth in claim 11, wherein each pawl includes a slot and the hopper includes pins that insert through the slots to hold each pawl, the pins and slots cooperate to enable the pawls to slide.

Claim 16. (Original) A disk handling system as set forth in claim 11, wherein each pawl includes an end with a hook for holding lifted disks.

Claim 17. (Original) A memory storage disk handling system, comprising:
a housing defining a hopper for holding disks;
an elevator pin mounted on the housing for lifting disks into the hopper;

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a servo motor attached to the housing;
a linkage assembly attached between the servo motor and the elevator pin for
lifting the elevator pin in response to the servo motor; and

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the hopper defines a base and includes a stack retainer means extending from
the base for aligning disks in a vertical stack, the stack retainer means includes more than
one pawl for holding lifted disks.

Claim 18. (Original) A memory storage disk handling system as set forth in claim
17, wherein the servo motor includes a shaft, the linkage assembly includes a single arm
mounted on the shaft.

Claim 19. (Original) A memory storage disk handling system as set forth in claim
18, wherein the arm has a fixed end and a moveable end, the fixed end is fixed with respect
to the shaft, the moveable end includes a cam surface that cams against the elevator pin to
enable the elevator pin to move in response to the servo motor.

Claim 20. (Original) A disk handling system as set forth in claim 19, wherein the
stack retainer means includes three posts oriented to surround lifted disks, each post
includes a hollow portion, the pawls normally extend from the post and retract within the
hollow portions of the posts when a disk lifts past the pawls.

Claim 21. (Currently amended) A memory storage disk handling system,
comprising:

a housing;
an elevator pin mounted on the housing ~~for lifting disks, wherein the elevator~~
pin presses a single disk into a stack of disks;
a servo motor attached to the housing;

a base having a position sensor; and
a linkage assembly between the servo motor and the elevator pin.

Claim 22. (Previously presented) A memory storage disk handling system as set forth in claim 21, wherein the position sensor includes a mechanical arm, the arm engages the elevator pin to detect elevator pin position.

Claim 23. (Previously presented) A memory storage disk handling system as set forth in claim 21, wherein the position sensor includes an optical sensor element.

Claim 24. (Previously presented) A memory storage disk handling system as set forth in claim 21, wherein the position sensor includes a magnetic sensor element.

Claim 25. (New) A memory storage disk handling system as set forth in claim 1, wherein the stack of disks has a top and a bottom, and wherein the single disk is added to the bottom of the stack.

Claim 26. (New) A memory storage disk handling system as set forth in claim 1, further comprising a conveyor.

Claim 27. (New) A memory storage disk handling system as set forth in claim 26, wherein the conveyor delivers disks to the memory storage device handling system for the elevator pin to stack the delivered disks into a stack

Claim 28. (New) A memory storage disk handling system, comprising:
a housing defining a hopper for holding disks in a stack;
an elevator pin mounted on the housing for lifting disks into the hopper; and

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a plurality of pawls for holding disks, wherein the plurality of pawls slide between a retracted position which enables the elevator pin to lift disks into the stack and an extended position for holding disks.

Claim 29. (New) A disk handling system as set forth in Claim 28, further comprising a servo motor and a linkage assembly, wherein the linkage assembly is attached between the servo motor and the elevator pin for lifting the elevator pin in response to the servo motor.

Claim 30. (New) A disk handling system as set forth in Claim 28, wherein the disks are retained in a vertical stack.

Claim 31. (New) A disk handling system as set forth in Claim 29, wherein the linkage assembly includes at least one belt and at least one pulley.

Claim 32. (New) A disk handling system as set forth in Claim 29, wherein the linkage assembly is a gear linkage assembly.